EX PARTE OR LATE FILED

RECEIVED

FEB 23 1995

FCC MAIL ROOM

UNIVERSITY OF MARYLAND AT COLLEGE PARK

INSTITUTE FOR SYSTEMS RESEARCH
CENTER FOR SATELLITE AND HYBRID COMMUNICATION NETWORKS

February 20, 1995

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, DC 20554

RE: Ex Parte Presentation
CC Docket No. 92-297

DOCKET FILE COPY ORIGINAL

Dear Mr. Caton:

Enclosed, please find a letter addressed to the Honorable Reed Hundt, Chairman of the FCC, regarding the preservation of the 28 GHz band (27.5-29.5 GHz) for the use of fixed satellite services (FSS) systems. The letter is signed by our Senior Research Scientist, Dr. S. Joseph Campanella, a renowned figure in the satellite industry and formerly the Chief Scientist at COMSAT Labs.

It is the position of the Center for Satellite & Hybrid Communication Networks (CSHCN) that there is tremendous future commercial potential for communications satellites operating within the Ka band. To authorize use of the Ka band to Local Multi-Distribution Services (LMDS) would greatly impede the growth of the next generation of commercial communications satellites.

Any correspondence regarding this issue should be addressed to me at the address shown on the letterhead. Thank you very much for your attention to this matter.

Sincerely,

John S. Baras
Director

Enclosure

No. of Copies rec'd 0
List A B C D E

A. V. WILLIAMS BUILDING (115) • COLLEGE PARK, MARYLAND 20742 • (301) 405-7900 • FAX: (301) 314-8586

UNIVERSITY OF MARYLAND AT COLLEGE PARK

INSTITUTE FOR SYSTEMS RESEARCH
CENTER FOR SATELLITE AND HYBRID COMMUNICATION NETWORKS

February 13, 1995

Honorable Reed E. Hundt
Chairman
Federal Communications Commission
1919 M Street, N.W.
Washington, DC 20554

Dear Chairman Hundt:

Commercial Communications Satellite systems have yielded the greatest revenue stream for the U. S. economy of any other space technology business endeavor. Commercial communications satellite systems, which now ring the world, started out with authorization to use the C-band allocation in the 1960s. The rapid growth of commercial communications satellite systems outstripped the capacity of the C-band allocation by the mid-1970s and, fortunately, based on the research and development performed on NASA's ATS and CTS experimental satellites, a new operating band was established at Ku band in the 10 to 14 GHz spectrum range where further capacity expansion occurred. Use of the Ku band allocation has become the most important growth area for commercial satellite systems, however, its capacity is now being outstripped.

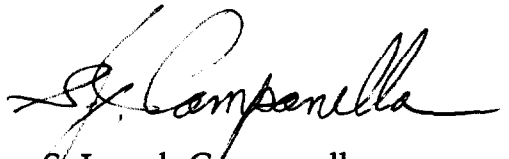
There is a real need for expansion to new bandwidth, and the next band available is the Ka band where NASA's Advanced Communications Technology Satellite (ACTS) is now providing an opportunity for the kind of experimentation that is needed in advance of commercial application. It is interesting to note that the commercial industry usually does not feel comfortable in using a new frequency band until some research organization such as NASA provides the where-with-all for a vehicle like the ACTS to establish the principles needed to successfully operate in the new band.

A. V. WILLIAMS BUILDING (115) ♦ COLLEGE PARK, MARYLAND 20742 ♦ (301) 405-7900 ♦ FAX: (301) 314-8586

The impetus provided by the ACTS is establishing the new technology needed to harness use of the Ka band for commercial communications satellites. New earth station architectures have been developed, a firmer understanding of the impact of the earth's atmosphere on Ka band propagation is being obtained, the use of onboard processing and adaptive coding is being pursued, the use of hopping beams to achieve broad area coverage while maintaining high power density on the earth to achieve high bit rates is being demonstrated. All of these constitute the fabric of a new generation of commercial communications via satellite in the 2 GHz bandwidth available at Ka band.

On behalf of the Center for Satellite & Hybrid Communication Networks at the University of Maryland, we therefore submit that authorization of Local Multi-Distribution Services (LMDS) to use the Ka band spectrum which has for years been intended as the next band for expansion of commercial communications satellites is totally inappropriate and will greatly impede the growth of the next generation of commercial communications satellites. Already, even before the completion of the ACTS experiment program, new forward looking commercial uses of Ka band such as Teledesic are seriously being proposed. Do not stop this potential by mistakenly permitting LMDS to occupy this band. LMDS can easily operate in a band somewhat higher in frequency spectrum leaving Ka band for the growing impetus to expand commercial communications satellites.

Sincerely,



S. Joseph Campanella
Senior Research Scientist